

20 July 1964

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Subject: Checkout of [ ] Counters [ ]

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Enclosures: (1) Three (3) copies Specifications [ ]  
Counters [ ]

[ ]  
dated July 20, 1964

(2) Three (3) copies In-Plant Acceptance Test  
Procedure for "X" - "Y" Stereo Chip  
Comparator [ ] dated July 1964

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Gentlemen:

[ ] did not conduct a full check on the  
electronic system supplied [ ] However, we did determine  
the compatibility of the [ ] counters with [ ]  
signals from the Interferometer. A set of specifications have  
been made, which are attached herewith, enclosure (1). The  
preset zeroing and reversing switches provided with the [ ]  
equipment have been found to operate properly.

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It was noted that if the transmission button is pressed,  
the last count is locked into its last reading. Consequently,  
if there is any change in position of the Interferometer, then  
pulses are produced which are not counted. These pulses  
would actuate the alarm light and alarm buzzer. It was found  
that it is necessary to rezero the machine in order to start  
any measurements, when this condition occurs.

The method of operation of the counters described above  
may produce operational problems, should there be any vibration  
or motion of carriages while transmission is being performed.  
In a normal installation where some vibration is a possibility,  
the present electronic system is inadequate. The following  
recommendation is hereby made, which was previously recom-  
mended to [ ] at the beginning of this project.

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A memory circuit may be provided so that the last number is stored as soon as the transmission button is depressed. Consequently, the operator may move his carriages to the second desired position during the transmission of information. If any vibrations would occur then the information being displayed on the counter will change accordingly, without affecting the stored information. In this manner, the counter will always show the accurate position of the microscope relative to the chip being viewed. No loss of accuracy can occur since counting is always being performed independent of transmission.

This last recommendation is not mandatory, however, it would certainly enhance the system operation.

Very truly yours,

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